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ABSTRACT

A study examined the attrition rate in the Wichita Practical Nursing School in Wichita, Kansas, and the effectiveness of a study skills workshop in reducing the attrition rate. Using a quasi-experimental control group design, the researcher studied the attrition rates of three consecutive classes at the school. The first two classes served as control groups. Members of the third class were asked to participate voluntarily in a study skills workshop. Of the 59 students in the class, 71 percent did so. Covered in the workshop were the following topics: taking responsibility for one's own education, success and goal setting, time management, reading texts, notetaking and outlining, studying for and taking tests, helping instructors improve their teaching, and making friends. While data did not demonstrate that the study skills workshop had any effect on the attrition rate, fewer students who attended the workshop failed academically. In addition, the attitudes and enthusiasm of the students who attended the workshop surpassed those of members of the previous classes. (Appended to the study report are the workshop agenda, the results of student evaluations of the workshop, and grade scores and means for both groups studied.) (MN)

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THE EFFECT OF A STUDY SKILLS WORKSHOP ON THE ATTRITION RATE IN A PRACTICAL NURSING PROGRAM

A Thesis Submitted to the Graduate Division in Partial Fulfillment of the Requirements for the Degree of Master of Science

By

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PITTSBURG STATE UNIVERSITY

Pittsburg, Kansas

May, 1982

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ABSTRACT OF THESIS

THE EFFECT OF A STUDY SKILLS WORKSHOP ON THE ATTRITION RATE IN A PRACTICAL NURSING PROGRAM

This study presents an overview of the attrition rate in the Wichita Practical Nursing School and the results of an experimental method used to decrease attrition.

The population selected for the attrition study consisted of three consecutive classes of practical nursing students from the Wichita Practical Nursing School. A quasi-experimental control group design was utilized. Two of the classes were the control groups. A Study Skills Workshop was offered to the third class on a voluntary basis, with seventy-one per cent of the students participating.

Analysis of Variance was used to compare the mean scores of the entrance tests of each of the three classes to determine whether or not there was a significant difference between or within the three groups under study.

The data demonstrated no change in the attrition rate with the offering of a Study Skills Workshop, although fewer students failed academically. The attitudes of the students in class and the enthusiasm of the students who attended the workshop surpassed previous classes.

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PITTSBURG STATE UNIVERSITY

May, 1982

WE HEREBY RECOMMEND THAT THE THESIS PREPARED UNDER OUR SUPERVISION BY DONNA JEAN GRANGER ENTITLED THE EFFECT OF A STUDY SKILLS WORKSHOP ON THE ATTRITION RATE IN A PRACTICAL NURSING PROGRAM BE ACCEPTED AS FULFILLING IN PART REQUIREMENTS FOR THE DEGREE OF MASTER OF SCIENCE IN TECHNICAL EDUCATION.

APPROVED:

Thesis Advisor Frank M. Slapar

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CHAPTER I

INTRODUCTION

Student withdrawals from nursing schools is a complex and constant problem. Large and ever increasing numbers of students who drop out of a nursing program constitute a massive waste of human resources, material resources, and unfulfilled aspirations. There is the emotional cost to the student besides cost in terms of time and energy spent by both student and faculty. Probably the emotional cost is the most detrimental to the student. The stigma attached to failure to achieve success may cause permanent psychological damage.

In 1940, twenty-seven per cent of students admitted to nursing programs withdrew before they completed their programs. In 1945, the percentage of withdrawals was thirty-one; in 1950, thirty-three per cent (Tate, 1964). Of about 50,000 students admitted annually to nursing schools, approximately 35,000 are graduated. The Kansas State Board of Nursing Annual Report for 1980 indicates forty-two per cent of students withdrew from nursing programs in Kansas. With society's needs for more educated people to meet its health needs, and the high drop out rate from schools of nursing, attrition may be viewed as a major problem.

A common practice of solving the problem of student attrition is to increase the enrollment of students in nursing programs. The Kansas State Board of Nursing Annual Report contains evidence of this practice of increased enrollment. The study shows that five new baccalaureate, nine new associate, and four new practical nursing programs have been accredited in the last ten years in order to increase this enrollment trend. However, there has been a decrease in the diploma nursing programs in recent years. This results in an overall increase in the number of nursing students for the state of Kansas. Regardless of this increase in the number of nursing programs, there is still a shortage of nurses, a dissatisfaction among nurses, and an ever increasing attrition rate among nursing students.

Purpose of the Thesis

Many attempts have been made to decrease attrition, either by increasing the number of students enrolled in nursing programs or by increasing the number of nursing schools. The purpose of this thesis is to explore a method to decrease attrition in a practical nursing program. The Review of Literature will show reasons for student drop-out, and ways to predict success or failure, but very few attempts have been made to try to decrease attrition by a positive approach.

The Problem

The Wichita Practical Nursing School admits sixty students to the program twice a year, in January and in July, but the number of students graduating is always less then the number beginning each class.

There have always been students who withdrew or were terminated from the Wichita Practical Nursing School, but the attrition rate has steadily been increasing. Many students have dropped out because they initially were not aware of what a total commitment this program would be. They were not convinced it would require studying and a large portion of their time. Many did not take the responsibility seriously. Some could not succeed academically because of the length of time since they had been in an educational environment. They did not have good study habits or use good time management.

Studies have been done to show reasons for withdrawal from nursing programs. Personal reasons and academic failure were the two most common reasons for withdrawal. This researcher has not identified studies which were conducted to determine specific reasons for withdrawal or whether assistance has been offered the applicants before entering a program.

This researcher learned that the National League for Nursing (NLN) has no statistics or information on student

attrition of practical nursing programs in the United States.

A Study Skills Workshop was proposed prior to entry into the Wichita Practical Nursing School with anticipation of this workshop making an impact on the attrition rate for this school.

Hypothesis

Approximately twenty per cent of the students who begin the practical nursing class fail to finish with the class - twelve out of sixty. However, they do have the option of re-enrolling with another class.

Studies have been conducted by the Wichita Practical Nursing School on reasons for termination from the school. These studies were done for periods of five years which would include ten classes per five year period. The reasons for termination were categorized as: academic, personal, health, career change, and other. The findings showed twenty-three per cent withdrew due to personal reasons, fifteen per cent academic failure, twelve per cent health reasons, seven per cent career change, and ten per cent other. Personal reasons included husband transfer, family responsibilities, financial burdens and dislike for nursing. Academically, students failed to achieve a passing grade of seventy-five per cent in a course and/or failed to obtain a satisfactory evaluation in the clinical area. Most

of the students withdrew within the first three months of the program.

A workshop on how to develop good study habits may not decrease attrition due to the high withdrawal rate as a result of personal reasons. The classes included in this study indicated Class 54 had a higher percentage of academic failures and Class 55 and 56 had a higher percentage of students withdrawing for personal reasons. Time management, priorities, and attitudes were stressed in the workshop and this may help students cope with family responsibilities, thus helping them stay in the program.

It is hypothesized that "there will be no significant effect on the attrition rate within the Wichita Practical Nursing School with the participation of the students in a Study Skills Workshop offered prior to entry into the program."

Assumptions and Limitations

It is assumed that students in the Wichita Practical Nursing School are similar to students of other Practical Nursing Programs. Although all nursing schools have certain admission requirements, on the whole these are very similar.

Data were gathered on three different classes of practical nursing students who attended, or are attending the Wichita Practical Nursing School. There are many similarities among the classes. Each applicant must be a

graduate of an accredited high school or have a high school equivalent, G.E.D. An entrance test and a general math test is required. The entrance test used by the Wichita Practical Nursing School is the Cognitive Abilities Test (CAT). This test evolved from the Lorge-Thorndike Intelligence Test Series. The Cognitive Abilities Test provides a set of measures of the individual's ability to use and manipulate abstract and symbolic relationships. The parts of the test used are the Verbal Battery and the Non-Verbal Battery. The Verbal Battery is made up of four subtests: Vocabulary, Sentence Completion, Verbal Classification, and Verbal Analogies. The primary emphasis is on the individual's flexibility in using his concepts. The Non-Verbal Battery consists of three subtests: Figure Analogies, Figure Classification, and Figure Synthesis. These subtests emphasize discovery of and flexibility in manipulating relationships expressed in figural symbols or patterns. It measures ability that is not bound by formal school instruction.

The tests are arranged in a multi-level format. Level G is used for the Wichita School of Practical Nursing which is for grades ten and eleven.

The Cognitive Abilities Test was normed jointly with the Iowa Tests of Basic Skills and the Tests of Academic Progress. Five types of norms are provided for the interpretation of scores. The norm used by the Wichita

Practical Nursing School is Percentile Rank Corresponding to Standard Age Score. The thirtieth percentile is considered average for applicants, although applicants who are lower than the thirtieth percentile have been admitted to the program. Scores in the single digits are usually considered unacceptable.

The Math Pretest was devised by the math instructor and included general math skills covered in the mathematics course. It has proved to be reliable. Anyone making over forty per cent has been able to pass the math course in the curriculum, although those with lower scores have been accepted and have completed the course successfully.

A personal interview is also conducted with each applicant. The applicants are interviewed by the instructors of the school. Poise, communication, interest, work experience, primarily length of time at a particular job; high school grades, with absenteeism stressed; and two references are considered of significance in the interview.

All of these pre-admission requirements are evaluated before an applicant is accepted into the program. There is an Admission Committee who reviews each applicant's folder. After being accepted, a physical and dental examination is required before beginning the program.

It is assumed that every student has an equal chance of completing the practical nursing program. Although age, sex, marital status, or number of children could play a

role in the attrition rate, it is not a concern of this paper.

Definition of Terms

Baccalaureate Nursing Program - a college based nursing program, four years in length. Graduates receive a Bachelor of Science in Nursing (BSN) degree. At the completion of the program the graduate may take the State Board Exams and if she/he passes will become a Registered Nurse, R.N.

Associate Degree Nursing Program - a college based nursing program, usually in a Community College, two years in length. Graduates receive an Associate Degree in Nursing (ADN). At the completion of the program the graduate may take the State Board Exams and if she/he passes will become a Registered Nurse, R.N.

Diploma Nursing Program - a hospital nursing program of three years in length. At the completion of the program the graduate may take the State Board Exams and if she/he passes will become a Registered Nurse, R.N.

Practical Nursing Program - a one year nursing program, often a part of Vocational Education, with the major emphasis on basic bedside nursing skills. At the completion of the program the graduate may take the Practical Nursing State Board Exams and if she/he passes will become a Licensed Practical Nurse, L.P.N.

Attrition - reduction in the number of students.

Drop-out - in this paper anyone who drops out of the Practical Nursing Program within Level I, which is the first three months of the course. The students may re-enter with another class, but they would then be considered as a student of that class.

Study Skills Workshop - an informal class to acquaint the new students with the Practical Nursing Program and to give them tips on how to study, take notes, and prepare for tests. The objectives of this workshop were for the student to be able to:

1. Take responsibility for their own education.
2. Develop positive attitudes concerning their education.
3. Set obtainable goals.
4. Plan their time to help obtain these goals.
5. Take notes and study effectively.
6. Differentiate between the types of tests and learn how to take the tests.
7. Cope successfully with less apprehension about beginning the program.

Personal Reasons - some students withdraw for personal reasons. These include spouse transfer, financial difficulties, home responsibilities, dislike for nursing, and the feeling that they can not be successful.

Academic Failure - any student who receives a grade less than seventy-five per cent in any theory class or who receives an unsatisfactory clinical evaluation will be terminated from the program.

Clinical Instructor - an instructor who supervises the student in the health care institution.

Theory Instructor - an instructor who teaches courses in the classroom.

Time Management - the organization of an individual's time so they can accomplish set goals by the time specified. This includes arriving at school on time and performing all work within specified time lines.

Goals - what one wishes to accomplish in the end. What a student is aiming to achieve, whether it be short or long term goals.

Attitudes - a feeling or emotion in response to a stimulus (as an object, concept, or situation).

Level I - the first three months of the Practical Nursing Program and includes five classes and clinical experience.

Level II - the second three months of the Practical Nursing Program with more difficult skills to acquire.

Level III - the last six months of the Practical Nursing Program and includes specialty areas and only one theory class at a time.

General Education Development - general achievement tests designed to measure the educational development of the individual at the high school level. The tests attempt to measure the individual's acquisition of broad knowledge, ideas, and concepts and his ability to understand, evaluate, and think logically.

CHAPTER II

REVIEW OF LITERATURE

A review of literature does not adequately cover the problem of attrition in schools of nursing. The word "drop-out" is not clearly defined and there are few attempts made at finding a solution to the problem. Many studies showed reasons students withdrew from schools of nursing. Some tried to predict student success and failure by different variables, and a few offered suggestions as approaches to take to reduce attrition. Two implemented new methods to help correct the problem (Cohen & Gesner, 1972; Nelson 1979).

Frequently, the literature which deals with student nurse attrition consists of simply an author's ideas, or beliefs about what causes students to withdraw. Most often, their beliefs are not backed by research. There does exist some research studies in the field. These studies can be classified in the following general areas: 1) withdrawal by type of program, 2) characteristics of students who are likely to succeed or fail, 3) reasons for student withdrawal, and 4) suggestions for decreasing attrition.

Classification of Nursing Students by Type of Problem

As the role of nurse develops from the traditional concept of physician's helper to a greatly liberalized concept of independent practitioner, the nursing profession has the dilemma of educating future nurses for a role which is difficult to define. It is a confusing task to try to differentiate the goals for the various types of basic nursing programs. There are three types of basic professional nursing programs: 1) the Associate Degree Program - a two year college program, 2) the Diploma Program - a three year hospital program, and 3) the Baccalaureate Program - a four year college program. Graduates of these programs complete the same licensing examination, receive the same registration, and often are considered interchangeable in employment situations.

There is also a vocational or practical nursing program, usually of one year duration. These graduates complete a different licensing examination, but have many of the same functions as the professional nurse.

There is no significant distinction among students from differing types of nursing programs, or no distinct personality characteristics. The major dissimilarities among the professional nursing programs are in economics of time and money rather than in personal characteristics of their graduates (Richards, 1972).

The overall attrition rate for the baccalaureate degree programs is substantially higher than that of diploma programs (Tate, 1961). In Kansas in 1980, the attrition rate for diploma programs was fifty-four per cent. For associate degree programs, forty-seven per cent, baccalaureate degree programs, fifty-eight per cent, and practical nursing programs, twenty-one per cent (Kansas State Board of Nursing Annual Report).

A large number of baccalaureate students lost to the nursing program may have transferred to another major within the college with little or no loss of credit. The student who withdraws from the diploma program is not only lost in the nursing program, but also receives no credit in transferring to another educational program.

Characteristics of Students Likely to Succeed or Fail

Although there seems to be no personal differences among graduates of the different nursing programs, several studies have shown there are certain characteristics of the student likely to succeed or to fail.

In a research project by Munro (1980), path analysis, multiple regression, and factor analysis were used to test a theoretical model of the process of drop out from higher education, based on Tinto's (1975) theory. Tinto views academic and social integration of an individual into an institution and the student's interaction with these systems as the primary determinants of persistence. Students from

all over the United States who were entering two and four year nursing programs in the fall of 1972 were included in Munro's sample. Approximately twenty-one per cent of the two year and forty-one per cent of the four year students withdrew. Socioeconomic status had a direct effect on persistence in the institution, but not on persistence in nursing. This was in contrast to another study which showed that girls whose fathers had more education, and higher income were more likely to drop out of nursing school (Kibrick, 1963).

Among associate degree students, self-esteem explained a large amount of variance in persistence in nursing. Students in the associate degree program with lower self-esteem were more likely to persist in nursing. For baccalaureate students, high self-esteem led to persistence in nursing (Achord, 1975; Munro, 1980). For both groups parental support had a strong effect on educational aspirations and students were more likely to remain in the nursing program if they had this support. This research showed academic integration had a much greater effect on persistence than did social integration.

An investigation was done at the Ohio State University School of Nursing in 1966 using 119 student nurses. Each student was given the American College Test (ACT), the 16 Personality Factor Inventory, and the Myers-Briggs Type Indicator (MBTI). The MBTI consists of four measures

related to preferences for different methods of perception and judgment. Also the pre-nursing grade point average was a factor. This study was done on one class from a school and the results were not conclusive. The results indicated that pre-nursing academic performance was a good predictor of success. The ACT Mathematics Usage showed a statistically significant relationship with attrition. This study also showed that students who withdrew from the nursing program tended to be more independent and venturesome (Wittmeyer, Camiscioni, & Purdy, 1971). The study recommended further exploration in this area.

The School of Nursing at the Research Medical Center in Kansas City conducted an experiment in 1975 to discern if certain variables might differentiate between the students who withdrew from their diploma program and those who remained in the nursing program. It only included eighty-five students of one class, sixty-one who remained and twenty-four who withdrew. The variables included high school rank, grade point average in nursing school, and the Psychological Corporation's Entrance Examination for Schools of Nursing. The entrance examination is comprised of subtests: General Information, Verbal Ability, Numerical Ability, Science, Reading Skills, and a personality inventory from the Edwards Personal Preference Schedule.

The General Information subtest was designed to measure a broad range of cultural knowledge and experience. The

significant difference here tended to suggest that the persisters may have been exposed to or sought a broader range of cultural experiences. It may be that the majority of persisters came from homes which encouraged participation in a broad range of such experiences.

A significant difference was obtained on the Reading Skills subtest. Because of the nature of a nursing curriculum, a difference might have been expected on the Science subtest. The reason this was not shown could have been because the subtest was designed to measure a broad range of science information. There were no significant differences between the persisters and those who withdrew on the personality inventory (Persisters and Withdrawals, 1975).

The major differences between the two groups of students in this study tended to be in the general area of academic achievement and ability which supports previous studies regarding the use of measures of academic achievement/ability in predicting success in a nursing program (Garret, 1960; Wittmeyer et al., 1971).

The University of Missouri College of Nursing has had a high attrition rate - sixty-five per cent withdrew in 1967. Research was done to test the hypothesis that specific personality factors are related to specific types of failure. The variables used included Strong Vocational Interest Blank (SVIB), High School Rank, Minnesota Multiphasic Personality Inventory (MMPI), the Missouri English-

Placement Test (MEPT), and the School and College Ability Test (SCAT).

The MMPI revealed that students who failed clinical practicum would be expected to be more rebellious, less anxious, less concerned with physical symptoms, and more socially inclined than the students who succeeded in clinical practicum. There were significant differences in the SVIB patterns. The two best scores for making predictions as to drop out from nursing were the Author scale and the Home Economics Teacher scale (Anderson, 1968).

Kibrick (1963) theorized the greater the degree of consensus to be between nursing educators and nursing students, the more likely the students would be to remain in the program. She used a research design comprised of eight instruments - knowledge, activities, relationships, self-concept, role attributes, anticipated adjustment, activation, and socio-economic background. The specific statements in the various instruments were drawn from the author's experience as a nurse, from interviews with nursing students and nursing educators, and from the literature. The entire class, a total of 460 students entering each of seven hospital schools of nursing, comprised the sample. The schools were approved by the National League for Nursing and had fairly large classes with the same national average in drop out rate. The findings revealed that students who were more realistic in their appraisal of nursing were more

likely to remain, whereas those who had expected the work of a nurse to be quite glamorous, dropped out. Students who resented authority and were less willing to submit to routines and practices of the school withdrew. They rejected their classmates and instructors and were less concerned with the welfare of their patients. The students likely to remain placed the welfare of others above their own personal interest. They took pride in their profession. The students likely to withdraw were aggressive and tended to belittle and blame others. The personal goals of the student likely to succeed were job security and upward mobility within the profession. The students who withdrew were more concerned with immediate gratification, such as glamour and excitement.

In a report by Munday and Hoyt (1965), the use of the ACT was proposed to predict grades of first year nursing students. The sample included three hospital schools of nursing and five university schools of nursing. For the nursing schools in this sample, ACT data had substantial validity for predicting success in a variety of specific courses (English, social studies, nursing fundamentals, and several specific sciences). Differences among nursing schools were so marked that generalization of one school's results to another would be hazardous. Cohen and Gesner (1968) found in their study the ACT to be unreliable. Montgomery and Palmer (1976) and Wittmeyer et al. (1971),

found the Mathematics Usage of the ACT to show a statistically significant relationship with attrition.

The above mentioned studies were mostly concerned with the young, single student, seventeen to twenty-two years of age. In the associate degree and practical nursing programs there is a wide age span, ranging from seventeen year old high school graduates to sixty year old grandmothers with General Educational Development (GED) certificates. Many are married with young children. Others serve as heads of households. Some students commute long distances.

A project at Union University, Jackson, Tennessee, was initiated by Montgomery and Palmer (1976) to try to predict success in an associate degree program using the ACT composite and mathematics scores in relation to the age of the student, whether any college credit had been earned, and whether the student had taken high school chemistry or physics. The results showed a high correlation between high ACT math scores and students who successfully completed the course and a low score for those who did not. Ninety-five per cent of the older age group successfully completed the course while sixty-one per cent of the younger group did so. The study indicated students could pass the course regardless of whether they had had high school chemistry or physics, although these courses would help.

Tate and Knopf (1968) stated that motivation and a stable personality seem to be most important in success as a

practical nursing student. The older age applicants are the most successful on state board examinations. The married student seems to have a lower drop out rate.

Reasons for Withdrawal from A School of Nursing

Most of the information obtained on the reasons why students withdraw from nursing schools was by questionnaires. It was found that sometimes director's reasons for withdrawal didn't match the student's reasons. Frequently directors of baccalaureate programs did not know why students withdrew (Knopf, 1975).

Students' reasons for withdrawing have been classified as voluntary or involuntary. Involuntary withdrawal occurs when the students have little or no choice of remaining in school, but must leave for academic failure, illness, financial difficulties, personal problems, or conflict with faculty. Voluntary withdrawal occurs when students themselves decide to drop out. Reasons for voluntary withdrawal are dissatisfaction with nursing or with the nursing program, and personal problems. Non-academic-involuntary withdrawal constitutes the most frequent reason for a student dropping out of a nursing program (Miller, 1974).

A research study conducted in Tennessee involved 140 professional nursing students who withdrew from six schools of nursing. The most prevalent reason for drop out was academic difficulty (thirty-one per cent). The second most

frequently mentioned reason was personal problems (twenty-one per cent). Only seven per cent listed financial problems as the reason for withdrawal (Miller, 1974).

Research Medical Center, in Kansas City, had the same results as Miller for the reasons their students withdrew. Their third most prevalent reason was change of interest. Flitter (1971) in his survey found scholastic failure to be the greatest reason for withdrawal (forty-four per cent), but change of interest was the second most common reason and personal problems third. Financial problems accounted for only one per cent of the withdrawals.

Munroe (1980) cited academic difficulty less often as a reason for withdrawal. In her study, loss of interest in nursing was the top priority. This could be related to lack of a clear understanding of the role of a nurse, or lack of knowledge of other career opportunities, or both.

Cohen and Gesner (1972), from an analysis of exit interviews at Cook County School of Nursing in Chicago, found emotional problems stemming from home and family situations and an inability to accept the demands of the nurse's work role played a prominent role in student withdrawal. Also lack of basic skills in reading, writing, and mathematics and poor study habits were additional contributory factors.

For practical nursing students, scholastic failure appeared to be the primary reason for withdrawal. Personal

reasons were second and loss of interest third (Tate & Knopf, 1968). Of all the nursing programs, practical nursing programs have a lesser tendency for withdrawal (Flitter, 1971; Knopf, 1975).

The variation in attrition rate by regions is an interesting aspect. According to the National League for Nursing, The United States is divided into four regions. Region I is the North Atlantic states, Region II is the Midwestern states, Region III is the Southern states, and Region IV is the Western states. For professional nursing programs, attrition is lowest in Region I, and highest in Region IV. For practical nursing programs, the highest attrition rate by region occurred in Region I.

Suggestions for Improving Attrition

Some suggested approaches to take in trying to reduce attrition included 1) a stricter selection process with the use of psychological tests along with entrance tests (Lamoureux and Johannsen, 1977), 2) sound personal and career counseling offered before entering the nursing program (Wilson & Levy, 1978), 3) "Survey of Nursing" course which places heavy emphasis on the various ways that persons having different talents, interests, and personalities can find satisfaction in a nursing career, and give the new student an accurate portrayal of the nursing profession (Wittmeyer et al., 1971), 4) a learning center (Kester,

1971), 5) a study skills workshop (Nelson, 1979), and 6) a program comprised of crisis intervention, remedial skills tutoring, and motivational or achievement group meetings (Cohen & Gesner, 1968).

At the Shepard-Gill School of Practical Nursing of the Massachusetts General Hospital, a Study Skills Workshop was found to be beneficial. The weak academic background of the students could be classified into three groups: 1) those students who admitted they had not applied themselves in high school, 2) those who had not chosen the right courses during their high school years, and 3) those who had been out of school for a number of years. The first two day voluntary workshop was conducted in 1977, the week before school began. Approximately eighty per cent of the students attended. The two main goals were to teach students good study skills and to familiarize them with some of the aspects of the program. They discussed note-taking, outlining, common sense approaches to studying, test anxiety, and how to study for a test. Student reaction to the workshops have been overwhelmingly positive. The students said they felt less anxious and more confident of their abilities after attending the workshop. Although they had no intention of doing a statistical analysis of the workshop results, a mid-year evaluation was done. The students reported they felt the workshop had been a great help (Nelson, 1979).

At Cook County School of Nursing in Chicago, in 1968, a program was implemented to try to improve the emotional problems of students and remedy their basic reading and math deficiencies. Three components were offered to students on a voluntary basis - crisis intervention, remedial skills tutoring, and motivational or achievement group meetings. Of the eighteen students who sought crisis intervention service, fourteen graduated. Of the eighteen who attended the remedial skills tutoring, all improved on math or reading and none were asked to leave for academic reasons. There were forty-four students involved in the achievement group discussions with a success rate of seventy-five per cent. The faculty were also offered programs to help with their teaching - consultation, seminars on teaching techniques, and leadership training. Programs to prevent attrition must take all factors into consideration, not just intelligence, if they are to succeed in reducing the present drop out rate (Cohen & Gesner, 1968).

Summary

Attrition continues to be a major concern for schools of nursing. There are many factors which contribute to a student "dropping out." If a student fails to adjust or continue in a program it may be due not only to poor performance and behavior, but because the student's personality and attributes are such that they are not suited to that program (Kibrick, 1963). Withdrawal can be a result of some

applicants having chosen what is the "wrong school." Students may succeed at one school which is compatible with their personality pattern and fail at another school (Thurston, Brunclik, & Finn, 1962).

Drop outs who withdraw from college affiliated nursing programs have more latitude in returning to some other form of education. Diploma school drop outs and practical nursing school drop outs lack this flexibility.

Research studies have been done in an effort to predict student withdrawal by the use of many variables. The ACT was deemed a good predictor by all but one. Math and reading skills make a difference as to whether a student will succeed. Academic Achievement seems the best in predicting student success. Self-esteem plays a big role in student accomplishment. Attrition is higher in baccalaureate programs than in the other types. This could be due to the increased difficulty of the program or lack of knowledge of the demands of a nursing program.

Little has been done in the way of improving, or vastly changing, the level of attrition. The consensus among nursing faculty is that their program is the best one and the only one and there is little cooperation between programs. Each school can contribute something to health care. If students had more knowledge about what is involved in nursing before they entered a nursing program, there might be fewer students who drop out and the attrition rate would be

directed on reducing attrition in nursing schools. If nurses themselves have difficulty defining "nursing" or the goals of the different programs, it is extremely difficult to expect students to completely understand what their role as a nurse should be.

CHAPTER III

METHODOLOGY

Setting

This study investigates whether the participation in a Study Skills Workshop decreases attrition in the Wichita Practical Nursing School.

Sixty students were accepted in the Wichita Practical Nursing School for the January class, but only fifty-nine matriculated. The week before the class began, a six hour Study Skills Workshop was held (Appendix A). A letter was sent to each student inviting them to the workshop (Appendix B). The workshop was voluntary, and was not a requirement for beginning the program. Forty-two attended the workshop. Transparencies with overhead projector were used along with lecture and discussion. The students actually took notes and outlined a lecture. The students were asked to fill out an evaluation at the conclusion of the workshop (Appendix C).

The workshop was conducted by the researcher with the exception of the introductory remarks which were presented by the School Director. She covered the aspects of the practical nursing program and answered any questions from the students.

Tables were set up in the school library where the workshop was held. It was a very informal, pleasant atmosphere and provided the students a chance to get acquainted with each other.

Subjects

Three classes of practical nursing students were included in this study. Two of the classes were not offered the Study Skills Workshop. Class 56 was offered the workshop on a volunteer basis. Although sixty students were scheduled to begin each class, sixty students did not always matriculate on the first day of school. This accounts for the differences in the number of students for each class. When unemployment is up, there are always more applicants for the program and more students do begin the class.

The target population of students selected for inclusion in the study met the following criteria:

1. began the program with either class 54, 55, or 56,
2. took the Cognitive Ability Test and the Math Pretest prior to entry into the program

The demographic characteristics of the students of the three classes included in this study are depicted in Table 1.

Instruments

Each student must meet certain requirements before entering the Wichita Practical Nursing School. An entrance test and a general math test is required. The Cognitive-

TABLE 1

DEMOGRAPHIC CHARACTERISTICS

	Class 54		Class 55		Class 56	
	N	%	N	%	N	%
Sex: Female	47	96	57	100	56	95
Male	2	4	0	0	3	5
Marital Status:						
Single	19	39	21	37	21	36
Married	22	45	19	33	26	44
Divorced	6	12	10	18	7	12
Separated	1	2	5	9	3	5
Widow	1	2	2	3	2	3
Race:						
White	39	80	41	72	50	85
Black	10	20	14	25	8	14
Other	0	0	2	3	1	1
Age in Years:						
17-20	13	27	14	24.5	11	19
21-25	18	37	13	23	13	22
26-30	5	10	19	17.5	13	22
31-35	3	6	8	14	10	17
36-40	3	6	5	9	3	5
41-45	3	6	4	7	1	2
46-50	1	2	1	1.5	5	8
over 50	3	6	2	3.5	3	5
Education:						
High School	39	80	38	67	32	54
G.E.D.	10	21	19	33	27	46

Abilities Entrance Test (CAT) provides a set of measures of the individual's ability to use and manipulate abstract and symbolic relationships. The parts of the test used are the Verbal Battery and the Non-Verbal Battery. Five types of norms are provided for the interpretation of scores. The norm used is the Percentile Rank Corresponding to Standard Age Scores. Thirty per cent is considered average for applicants.

The Math Pretest includes general math skills covered in the mathematics course. Anyone making over forty per cent has been able to pass the math course in the curriculum. Although these percentages are considered average, some students have been admitted to the program with lower scores and have successfully completed the program.

These entrance tests were begun with Class 54. In prior years the General Aptitude Test Battery (GATB) was used as an entrance inventory.

A passing grade of seventy-five per cent is required for each course in Level I. The Study Skills Workshop was a new instrument, pilot tested for the first time (Appendix A).

Design

This study employed a quasi-experimental control-group design. All three classes had the same admissions requirements and the means of the CAT scores were comparable. Class 54 and 55 received no treatment. Class 56 had the

option of attending a Study Skills Workshop prior to beginning the program. There was no random sampling because it was voluntary. All three classes followed the same program for Level I or the first three months of the program. Grade averages were then calculated. The information was collected from the student's folders.

CHAPTER IV

ANALYSIS OF DATA

This study was done to show the high level of attrition in a practical nursing program and to see if by offering a Study Skills Workshop prior to entering the program, the attrition would decrease.

Analysis of Variance was used to compare the mean scores of the CAT and the grades of the students of each of the three classes.

Results

Ten students dropped out of Class 56 of the Wichita Practical Nursing School. This is less than Class 55, but more than Class 54.

Class 54 began with forty-nine students. Six dropped out during Level I. One student withdrew for personal reasons, one for health reasons, and the other four were terminated for academic failure. This constituted a twelve per cent dropout rate.

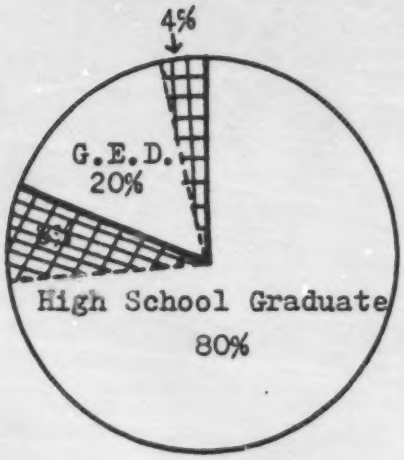
Class 55 began with fifty-seven students. Fifteen dropped out during Level I. Eight withdrew for personal reasons, two for health reasons, and five were terminated for academic failure. This constituted a twenty-six per cent drop out rate.

Class 56 began with fifty-nine students. These students were given the option of attending the six hour Study Skills Workshop, forty-two of which did. Ten students dropped out during Level I. Two withdrew for health reasons, four withdrew for personal reasons, two were terminated for not following required procedure regarding absences, one was terminated for academic failure, and one was terminated for unsatisfactory clinical performance. The personal reasons included husband transfer, dislike for nursing, frequent absenteeism, thereby just not ready for the program yet, and financial difficulties. This constituted a seventeen per cent drop-out rate. Of the ten who dropped out, six attended the Study Skills Workshop. Figures 1, 2, and 3 depict characteristics of the students in each of the three classes. The shaded areas indicate the students who withdrew. More students in each class had a high school education as opposed to a G.E.D., but the percentage of students with a G.E.D. in Class 56 was much higher. More students with a high school education withdrew in each class. More single students withdrew from the program than married students, and the percentage of white students withdrawing was higher than that of non-white students.

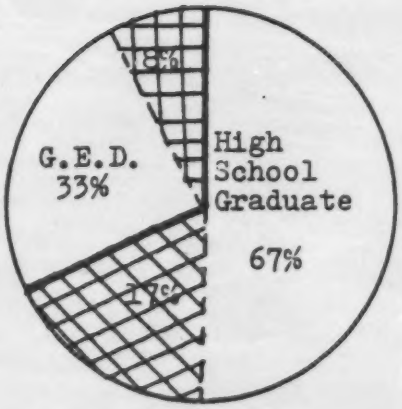
Another evaluation was done by the participants of the workshop at the end of Level I. All of the participants felt the workshop was helpful and would recommend it for

FIGURE 1

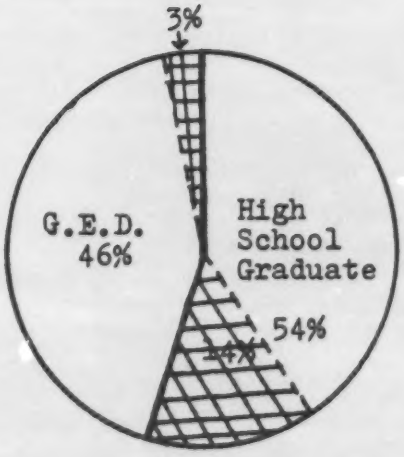
HIGH SCHOOL GRADUATE OR G.E.D.



CLASS 54



CLASS 55



CLASS 56

Percentage of Students who Withdrew

FIGURE 2

MARITAL STATUS

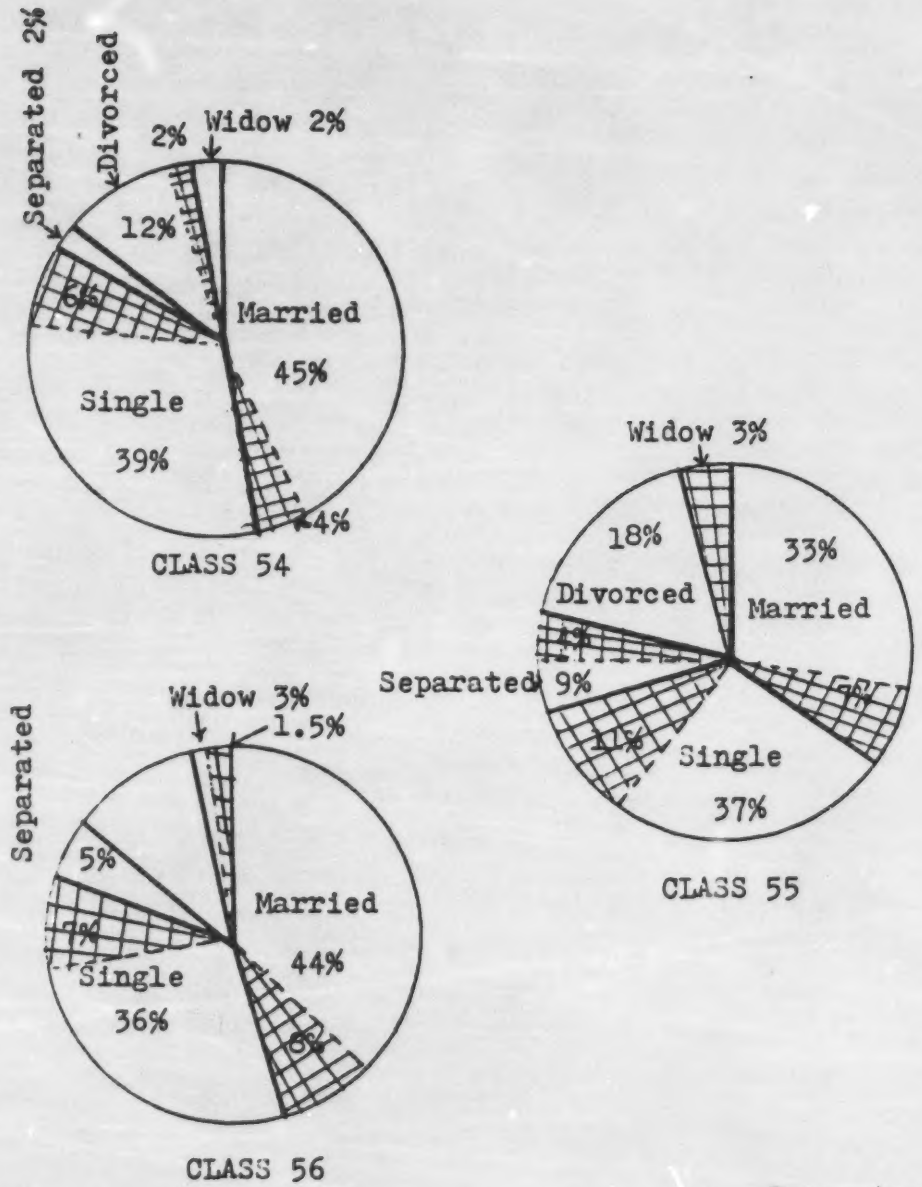
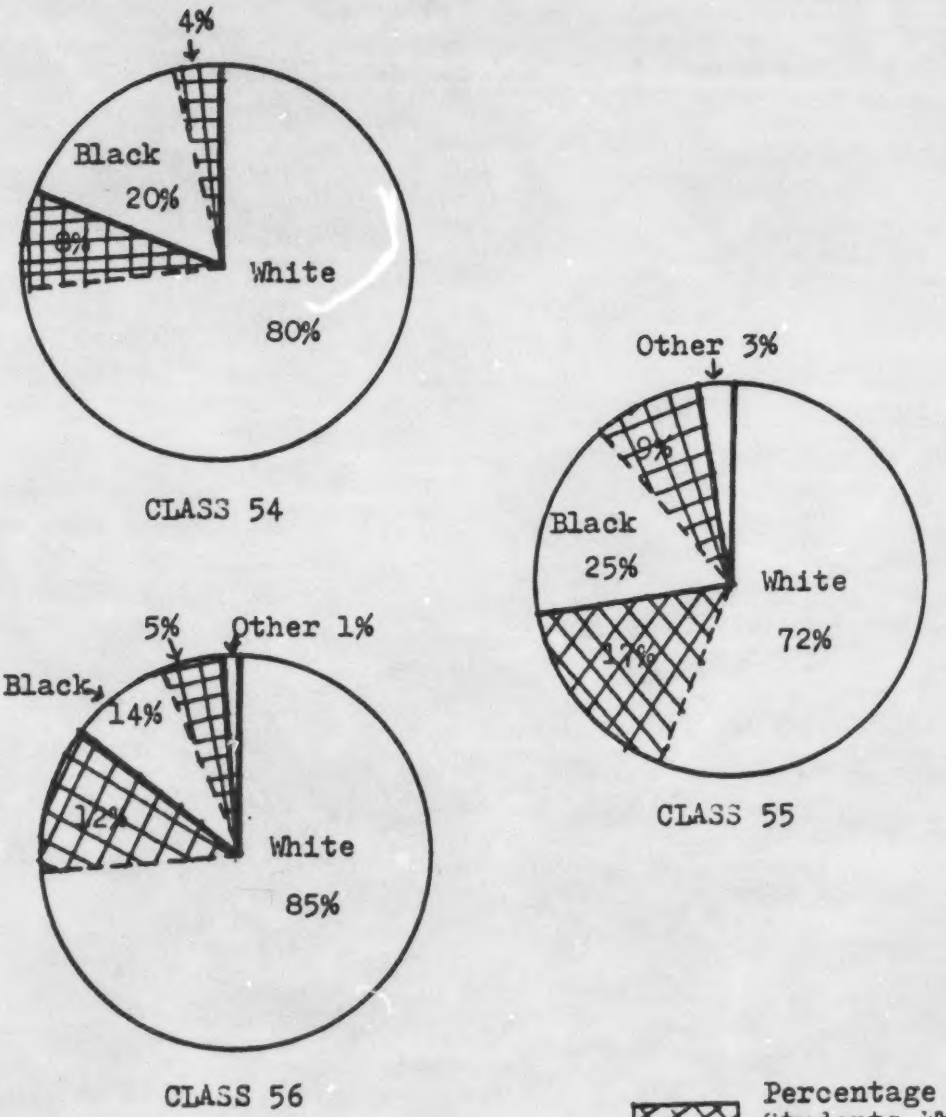


FIGURE 3

RACE



incoming classes. Three felt the workshop made them more apprehensive about the program. Some suggestions included offering more on time management, studying and taking tests, and suggestions about the Math Class (Appendix D). The students who withdrew from the program before the end of Level I did not fill out the second evaluation. Because of the economy, there are many variables that could not be controlled in the subjects. This could have had an effect on the attrition. Table 2 shows the reasons for drop-out per class.

Analysis of Variance

An Analysis of Variance was performed on the data generated by those participants who entered and completed the first phase of the program. This analysis of variance was performed in order to determine whether or not there was a significant difference between or within the three groups under study. The variables which were considered were the Verbal and Non-Verbal scores from the Cognitive Abilities Test (CAT), the general math scores from the school entrance exam, and the grade averages from the first phase of the Wichita Practical Nursing School Program.

Tables 3, 4, 5, and 6 are provided with explanatory remarks to report the results of the analysis of variance on the variables considered.

TABLE 2

REASONS FOR DROP-OUT

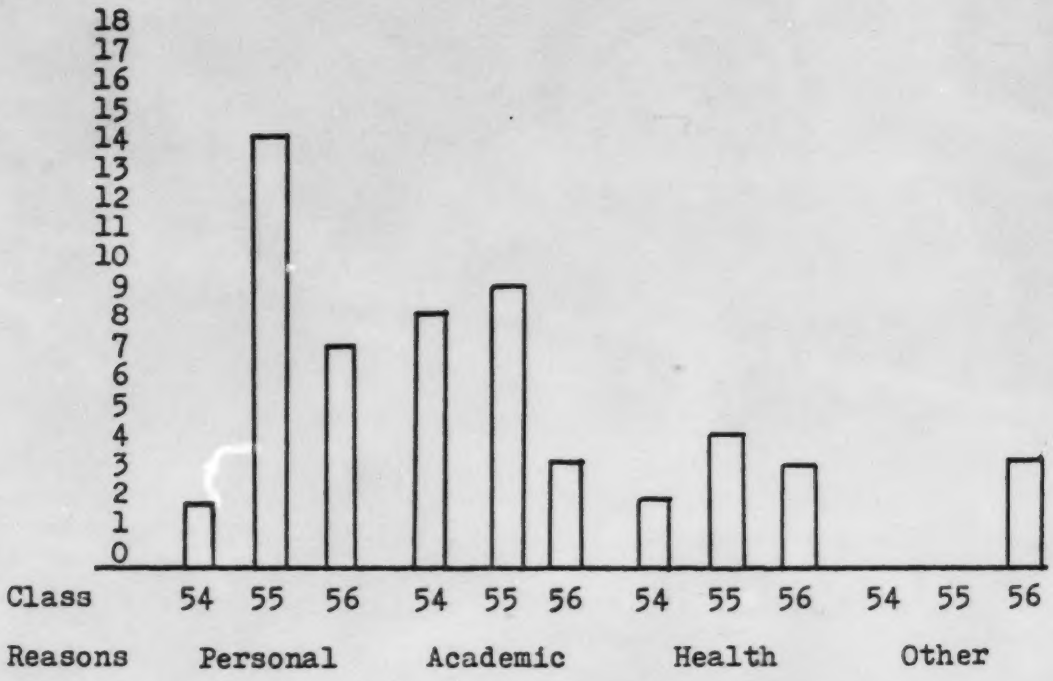


TABLE 3

SUMMARY TABLE ANALYSIS OF VARIANCE
FOR VERBAL SCORE

Sources of Variation	Sum of Squares	Degrees of Freedom	Variance Estimate	F
Between-Groups	801.3	2	400.65	.811
Within-Groups	57306.7	116	494.025	
Total	58108	118		

An F of 3.08 is significant at the .05 level with 2 and 116 degrees of freedom. Since this F of .811 as shown in Table 3 is less than 3.08 it is not significant at the .05 level. This would indicate no significant difference either between or within the three groups studied in terms of their Verbal scores.

TABLE 4

SUMMARY TABLE ANALYSIS OF VARIANCE
FOR NON-VERBAL SCORES

Sources of Variation	Sum of Squares	Degrees of Freedom	Variance Estimate	F
Between-Groups	1618	2	809	1.60
Within-Groups	58754	116	506	
Total	60372	118		

An F of 3.08 is significant at the .05 level with 2 and 116 degrees of freedom. Since this F of 1.60 is less than 3.08 it is not significant at the .05 level. This would indicate no difference either between or within the three groups studied in terms of their non-verbal scores.

TABLE 5

SUMMARY TABLE ANALYSIS OF VARIANCE
FOR MATH SCORES

Sources of Variation	Sum of Squares	Degrees of Freedom	Variance Estimate	F
Between-Groups	550.5	2	275.25	.60
Within-Groups	53940.96	116	465.0	
Total	54491.46	118		

An F of 3.08 is significant at the .05 level with 2 and 116 degrees of freedom. Since this F of .06 is less than 3.08 it is not significant at the .05 level. This would indicate no significant difference between or within the three groups studied in terms of their math scores.

TABLE 6

SUMMARY TABLE ANALYSIS OF VARIANCE
FOR COURSE GRADE SCORES

Sources of Variation	Sum of Squares	Degrees of Freedom	Variance Estimate	F
Between-Groups	205.8	2	102.9	.7289
Within-Groups	16375.8	116	141.17	
Total	16581.6	118		

An F of 3.8 is significant at the .05 level with 2 and 116 degrees of freedom. Since this F of .7289 is less than 3.08 it is not significant at the .05 level. This would indicate no significant difference between or within the three groups studied in terms of the course grade scores.

In summary the Analysis of Variance of the four variables studied indicate that there was no significant difference between or within the three groups on the variables at the .05 level with 2 and 116 degrees of freedom since all of the F values were less than the 3.08 required to be significant under those parameters.

CHAPTER V

SUMMARY AND CONCLUSIONS

The results of this study showed that attrition was not reduced appreciably for Class 56. The attrition rate was lower than Class 55, but higher than Class 54. Several instructors have commented on the change in attitudes of the students during Level I. The students have been more appreciative, not as hostile, more prompt with their work, and seemed to be taking the program more seriously. Attendance was better for Level I than it had been in past classes. Hopefully, these things were a result of the workshop.

The analysis of variance indicated there was not a significant difference between or within the groups studied in terms of the four variables considered.

Some interesting information evolved from the data. This included:

1. The number of students who have obtained a G.E.D has increased. Perhaps more people are realizing the importance of a high school education or equivalent.

2. A higher percentage of students who had a high school education as opposed to a G.E.D. certificate withdrew from the program. Students who take the time and effort to obtain a G.E.D. may make more of an endeavor to stay in the program.

3. More single students withdrew from the program. Single students may not be as sure of what they want. They experience greater difficulty in choosing a career.

4. There were two academic failures in Class 56 compared to four in Class 54 and five in Class 55. This decrease could have been a result of the workshop.

5. The mean scores of the CAT as well as class grade averages were comparable for all three classes.

Recommendations

Although the data did not reveal any significant decrease in attrition, it can not be said that the workshop did not have any effect on attrition. This can only be verified through further investigation.

This study points out concerns for future research. Change in attitudes of the students is one concern that should be addressed.

The following recommendations are made in view of the findings:

1. Future classes of the Wichita Practical Nursing School should be offered the Study Skills Workshop and further research done as to whether the change in attitudes of the students can be attributed to the workshop.

2. More instructors be involved in the workshop so reinforcement of the ideas stressed in the workshop can be made throughout the program.

3. Require the workshop be part of the curriculum so that all students must attend.

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APPENDICES

APPENDIX A

AGENDA FOR THE STUDY SKILLS WORKSHOP

9:00 Welcome - Coffee and Donuts

9:15 The Practical Nursing Program
Length, levels, subjects

9:45 Taking Responsibility for Your Education: Attitudes
Being successful. Not blaming others for poor grades.
Being on time, not being absent. Self-esteem - be positive.

10:00 Success: Setting Goals
All have accomplished one goal - get admitted to program
Set broad goals - then more specific ones. Change poor habits.

10:30 Break

10:45 Time Management: Managing Your Time
Monthly calendar - daily calendar. Plan time to study.
Breaks along with studying. Place to study.

11:15 Reading Texts
SQ4R Method - Survey, Question, Read, Recite, Write, Review
Form questions from titles in chapters. Questions on one column of paper, fold in half, answers in second column

11:45 Lunch Break

1:00 Notetaking and Outlining
Notebook with dividers for each class. Go over outlining.
Roman Numerals. Give short lecture - see how they took notes

1:30 Studying for Tests and Taking Tests
Diagrams - labeling
Different types of tests - answer sheet

2:00 Helping Instructors be Better Instructors
8 tips
Behaviors guaranteed to frustrate instructors

2:15 Making Friends
Good listener, be interested in others
Open-minded, not judgmental
Shortest distance between 2 people is laughter!

2:30 Questions and Evaluation

3:00 Adjournment

APPENDIX B

LETTER INVITING STUDENTS TO THE WORKSHOP

Wichita Public Schools
DIVISION OF VOCATIONAL AND CONTINUING EDUCATION
Central Vocational Building
324 North Emporia
Wichita, Kansas 67202

Wichita Area Vocational
Technical School

A Study Skills Workshop will be offered for all students being accepted into the January 11, 1982 LPN course.

The workshop will be held January 7, 1982 in the Library at the Central Vocational Building from 9-3:00 pm.

The program will include:

Taking Responsibility for Your Education

Setting Goals

Managing Your Time

Reading Your Text

Notetaking and Outlining

Studying For and Taking Texts

Helping Instructors Be Better Instructors

Making Friends

(This will include a lunch break from 12-1:00 pm)

Attendance at this workshop is not required, but it is designed to help the student function better in our program.

If you plan to attend, please let us know by phoning the Practical Nursing School, 265-9821, Ext. 8.

Donna Granger, R.N.
Workshop Leader

APPENDIX C

EVALUATION OF WORKSHOP

1. Did you find this workshop helpful?

   Yes - 38
   No - 0

2. What section(s) was/were the most helpful?

Attitude 12	Notetaking & Outlining 33
Setting Goals 18	Studying for & Taking Tests 30
Managing Your Time 27	Helping Instructors 9
Reading Texts 25	Making Friends 11

3. The Least helpful:

Attitudes 5	Notetaking & Outlining 2
Setting Goals 5	Studying for & Taking Tests 1
Managing Your Time 4	Helping Instructors 7
Reading Texts 3	Making Friends 10

4. Do you feel you will be more or less apprehensive about starting the program?

   More - 2 less - 37

5. Would you recommend this workshop for the next class?

   Yes - 38
   No - 0

6. Any suggestions for additions and/or changes would be greatly appreciated. Please comment:

   Shorten to 1/2 day - 2 commented on this
   More personal introductions
   Handled excellently
   Thanks for your effort
   Handled nice
   Kept them interested
   Nice job
   Helpful
   Presented in a most helpful way
   Great job

Everything covered that needed it
Way it was presented was very good
Good idea
Lets you know what to expect
Very informative
Everything carefully covered
Add more speakers

APPENDIX D

EVALUATION OF THE WORKSHOP AFTER THREE MONTHS

Since you have been in the Practical Nursing Program for almost three months now, I would appreciate your opinions on the Study Skills Workshop you attended prior to the beginning of school.

1. Do you think the workshop was helpful to you during this three months?

   Yes - 36
   No - 0

   "Made it easier to stay in school."
   "Made it easier to cope with problems, helped me organize my time."
   "Enabled us to meet people."
   "Let us know what to expect and gave us encouragement."

2. Which section(s) do you feel were the most helpful?

Attitudes 23	Notetaking & Outlining 27
Setting Goals 27	Studying for & Taking Tests 27
Managing Your Time 22	Helping Instructors 8
Reading Texts 10	Making Friends 16

3. Which section(s) do you feel were the least helpful?

Attitudes 5	Notetaking & Outlining 2
Setting Goals 4	Studying for & Taking Tests 3
Managing Your Time 6	Helping Instructors 14
Reading Texts 9	Making Friends 12

4. Were you less apprehensive about the program since you attended the workshop or were you more apprehensive?

   Less - 34
   More - 3

5. Would you recommend a half day workshop covering the same material for the next class?

   Yes - 37
   No - 0

6. Any suggestions you feel could have been covered that weren't, or anything that could be omitted. Please comment.

No comments - 10

"Tests were covered, but I'm still scared stiff."
"Everything covered very nicely."
"Stress not taking up class time with medical stories of ourselves and families."
"More on managing your time."
"Keep up the good work - you did a fine job."
"Just right."
"More suggestions about Math."
"Well covered."
"Handled well, gave a good insight as to what was to be expected."
"Keep it like it is, it covers everything."
"Leave it as it is, it is great."
"Everything was fine."
"Really helpful, the way it was presented."

APPENDIX E

SCORES AND MEANS FOR THE THREE CLASSES OF STUDENTS WHO COMPLETED LEVEL I

TABLE 7

MEAN SCORES

	Mean of Verbal	Mean of Non-Verbal	Mean of Math Pretest	Mean of Grades
Class 54				
withdrew	44.93	37.15	68.0	90.44
total	30.67	26.08	47.2	
	43.11	35.73	65.52	
Class 55				
withdrew	46.52	36.92	66.29	90.60
total	40.67	33.93	56.8	
	44.98	36.13	63.79	
Class 56	Attended Workshop			
withdrew	51.19	45.11	66.23	91.72
total	54.5	25.67	63.33	
	51.67	42.33	65.82	
	Did not attend the Workshop			
withdrew	66	43.77	72.62	91.38
total	48.75	52.5	65	
	61.94	45.82	70.82	
Total for Class	54.63	43.34	67.26	91.63

TABLE 8

SCORES OF STUDENTS OF CLASS 54

Students Who Completed Level I				
Subject	Verbal	Non-Verbal	Math	Grade Average
1	27	21	60	92.5
2	11	55	96	87.25
3	35	23	24	91.5
4	11	27	56	87
5	19	17	36	92.25
6	73	14	52	91.75
7	23	5	76	88.5
8	65	57	92	94.25
9	57	55	--	90.25
10	33	35	60	91.5
11	73	84	84	96
12	57	62	72	96.5
13	73	31	76	94
14	23	16	56	90.25
15	52	45	88	93.25
16	57	27	72	84.5
17	23	27	48	85.25
18	43	57	72	84
19	33	31	60	88.5
20	57	71	84	94.25
21	13	12	60	90.75
22	48	21	48	92.5
23	38	27	96	92.25
24	38	33	--	90.25
25	33	33	56	83.75
26	21	17	68	89.75
27	38	38	96	93
28	88	71	96	94
29	21	57	84	93
30	8	9	--	82
31	75	45	80	98
32	48	13	80	90.75
33	73	35	60	83.75
34	57	62	88	92.75
35	86	67	80	89.5
36	38	35	--	90
37	88	35	44	93.75
38	73	52	48	88.5
39	38	43	56	91

TABLE 8--Continued

Students Who Completed Level I				
Subject	Verbal	Non-Verbal	Math	Grade Average
40	27	27	52	83
41	48	31	60	94
42	--	--	--	92.25
43	--	--	--	87.24
Means	44.93	37.15	68	90.44

TABLE 9

SCORES OF STUDENTS OF CLASS 55

Students Who Completed Level I

Subject	Verbal	Non-Verbal	Math	Grade Average
1	43	53	76	88.75
2	45	48	64	90.75
3	38	5	72	83.75
4	91	55	88	86.75
5	38	27	48	86.5
6	52	35	68	95
7	91	55	64	93.5
8	12	5	60	86.25
9	17	29	80	83.25
10	13	67	40	90.5
11	67	71	40	94.75
12	43	33	40	84.25
13	27	13	76	95.5
14	88	67	92	96
15	43	43	48	95.25
16	31	35	80	95.5
17	14	27	52	85
18	27	84	88	92.75
19	67	29	84	89.25
20	23	5	--	80
21	31	23	56	94
22	35	11	72	91.75
23	14	27	48	92.25
24	38	16	88	87
25	19	21	84	89.25
26	65	14	56	89.75
27	52	35	40	88
28	73	29	88	95
29	48	77	88	91.25
30	27	3	56	91.25
31	23	27	72	93.25
32	33	87	60	96
33	52	33	72	92
34	48	21	48	84.5
35	57	52	68	91
36	62	48	96	98.25
37	57	38	60	95
38	67	43	64	90.5
39	91	62	80	95

TABLE 9--Continued

Students Who Completed Level I				
Subject	Verbal	Non-Verbal	Math	Grade Average
40	88	21	48	87.5
41	19	14	68	87.5
42	65	67	80	92.75
Means	46.52	36.92	66.29	90.60

TABLE 10

SCORES OF STUDENTS OF CLASS 56

Students Who Completed Level I Who Attended the Workshop				
Subject	Verbal	Non-Verbal	Math	Grade Average
1	38	67	84	89.5
2	35	10	56	91
3	91	84	84	97.25
4	31	55	80	95.5
5	48	3	84	94.25
6	81	75	68	92.5
7	57	45	40	92.75
8	48	4	36	90.25
9	23	71	96	95
10	67	81	68	92.25
11	31	29	68	92.50
12	33	45	64	85
13	52	71	60	96.75
14	16	35	48	81
15	79	71	64	96.5
16	38	38	52.4	96.25
17	48	11	72	89.75
18	86	71	64	92.5
19	38	31	56	91.5
20	16	21	68	83.75
21	29	12	52	82.75
22	48	43	60	90.25
23	57	33	52	92.5
24	48	52	64	92.25
25	23	10	36	89
26	81	38	88	94.75
27	73	55	92	98.75
28	65	31	64	93.75
29	62	77	84	93.25
30	57	71	88	92.75
31	65	45	36	83
32	88	33	88	97
33	48	35	80	95.25
34	43	97	84	92.75
35	43	62	48	88
36	52	12	56	90.25
Means	51.19	45.11	66.23	91.72